## REMARKS

Reconsideration of this application is respectfully requested. Petition is hereby made for a three-month extension of time to respond to the outstanding Final Office Action of October 9, 2007. A Request for Continued Examination of this Application is being filed with this Amendment.

Claims 1 – 21 are pending in the application. Upon entry of this Amendment, claims 1 – 21 will be amended to further clarify the claimed invention and conform the claims of this application to typical U.S. patent practice.

In the outstanding Final Office Action of October 9, 2007, the Examiner again rejected claims 1 – 21 under 35 U.S.C. §112, second paragraph, as being indefinite because of the recitation of certain terms in independent claims 1, 10, 20 and 21. Claims 1, 10, 20 and 21 have now been amended to address the concerns raised by the Examiner in his §112 rejection. As such, it is respectfully requested that the Examiner's §112 rejection now be withdrawn.

In the outstanding Final Office Action, the Examiner also again rejected claims 1 – 4, 6, 8, 10, 12 – 14, 16, 18, 20 and 21 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,741,315 to Lee *et al.*, and again rejected, as being unpatentable under 35 U.S.C. §103(a), claims 5, 7, 11, 15 and 17 over Lee *et al.* alone, and claims 9 and 19 over Lee *et al.* in view of U.S. Patent No. 5,527,348 to Winkler. The Examiner's rejections are respectfully traversed.

For a claim to be anticipated by a reference, every element in the claim must be disclosed in the reference. Here, Lee *et al.* do not anticipate claims 1 – 4, 6, 8, 10, 12 –

14, 16, 18, 20 and 21 because they do not disclose a transmission device, as described in independent claims 1, 10, 20, 21 and now 11 of the present application.

Independent claims 1, 10, 11, 20 and 21 of the present application describe a transmission device for transmitting into a human or animal, from outside of the human or animal, an alternating magnetic field to a receiver, which is implantable in the human or animal, for the purpose of supplying energy drawn from the alternating magnetic field to an energy consuming implant, such as a medical device, which is also implantable in the human or animal.

The transmission device is comprised of a coil for generating outside of the human or animal the alternating magnetic field for supplying the energy to the implant and a shield for shielding an environment outside of the human or animal from the alternating magnetic field generated by the coil. The coil extends longitudinally between a front end that is to be directed towards the receiver and a rear end that is to be directed away from the receiver. Claims 1, 10, 11 and 21 recite that a shield shields the environment outside of the human or animal by surrounding the coil, except at the front end of the coil so that the alternating magnetic field is transmitted towards the receiver when the front end of the coil is directed towards the receiver. Claim 20 recites that a shield shields a hand holding the transmission device by surrounding at least a portion of the coil. Claims 1, 10, 11, 20 and 21 further describe the shield as including a magnetizable core extending inside of the coil and a magnetizable casing integrated with the core and surrounding the

rear end of the coil and the circumference of the coil along at least a portion of the longitudinal extension of the coil.

In sharp contrast, Lee *et al.* disclose a device for receiving signals emitted by an active implanted medical device. The device has a signal collector coil for the reception of a magnetic induction which receives a useful signal component ($B_s$) emitted by the implanted device 26 and a parasitic signal component ($B_p$) of external origin. There is at least one collecting coil 12 wound on the central cylindrical core 14 of a half-pot (or open pot) 16 of ferrite. The central cylindrical core 14 is surrounded by an annular space 18 and a peripheral ring 20. There is also a compensation coil 22 that is wound on the peripheral ring 20 of pot 16. The ferrite pot 16 also carries an emission coil 24 serving for the transmission of signals from a programmer to the implanted device 26. Coil 24 is disposed on the outside peripheral of pot 16, since coil 24 does not participate in the reception of signals from the implanted device 26.

Lee *et al.* device is focused on improving the signal received by their signal collector system. Although Lee *et al.* teach the use of an emission coil 24, this coil is used to transmit communication signals from a programmer to the implanted device 26, not to supply energy to device 26.

In Lee *et al.* there is no discussion about ferrite pot 16 shielding the communication signals transmitted from emission coil 24, especially not about shielding an environment outside of a body from any alternating magnetic field that may be generated by coil 24. This is logical, since the programmer is used for low intensity

communication signals. Indeed, emission coil 24 is placed on the outside of the ferrite pot 16. Ferrite pot 16 has the shown shape shown in Figures 1 and 2 of Lee *et al.* to cause the collecting coil 12 to be crossed only once by the magnetic induction field lines $B_s$ and to cause the compensation coil 22 to be crossed twice in opposite directions by the same magnetic induction field lines $B_s$. This is done to improve the collected signal, not to shield a transmitted alternating magnetic signal. *See, e.g.,* Lee *et al.*, col. 4, line 49 – col. 5, line 9.

Clearly, the claimed transmission device of the present application and the apparatus for receiving telemetry signals disclosed in Lee *et al.* relate to different applications.

The claimed transmission device of the present application transmits an alternating magnetic field into a body to transfer energy to power a device implanted in the body, while simultaneously shielding the environment outside of the body from the effects of the alternating magnetic field.

In sharp contrast, Lee *et al.'s* apparatus receives communication signals from inside of a body from a device implanted in the body. Lee *et al.'s* apparatus does transmit programming signals to the implanted device using a coil on the outside of the pot on which it is wound, and as such, Lee *et al.* are not concerned with shielding the environment outside of the body from the effects of the communication signals.

The construction of the two devices is different. In Lee *et al.* the transmitting coil 24 is located on the outside of the pot 16, while the transmitting coil of the claimed

transmission device is located within the shield. Thus, in the claimed transmission device shields the environment from the alternating magnetic field generated by the coil, while in Lee *et al.* there is no structure that shields or confines the communication signals generated by the emission coil 24.

Thus, independent claims 1, 10, 11, 20 and 21 of the present application are not anticipated by Lee *et al.* And because independent claims 1, 10, 11, 20 and 21 are not anticipated by Lee *et al.*, dependent claims 2 – 4, 6, 8, 12 – 14, 16 and 18, which depend from such claims, are also not anticipated by Lee *et al.*

With regard to the Examiner's rejection of claims 5, 7, 11, 15 and 17 under §103(a) over Lee *et al.* alone, given the deficiencies in Lee *et al.* noted above, such claims are also not unpatentable over such reference.

With regard to the Examiner's rejection of claims 9 and 19 under §103(a) over Lee *et al.* in view of Winkler, Winkler discloses an apparatus for providing electrical field (E-field) shielding for electro-magnetic devices. The embodiment of the device shown in Figure 2 of Winkler is a programming head 100 from an implantable medical device programming system housed within a nonconductive exoskeleton. exoskeleton 102/104 of programming head 100 is a wire coil antenna This exoskeleton is comprised of top and bottom portions 102 and 104, respectively, and an internal retainer element 106, each of which are preferably made of molded plastic, ABS, or the like. Within the assembly 108 comprising one or more wires 110 coiled multiple times around a rigid spool 112. The wire coil antenna assembly 108 is preferably shielded from E-fields, but not from

magnetic fields (H-fields). A pattern of electrically conductive material, such as a nickel-acrylic paint or the like, is applied to interior surfaces of the exoskeleton to define multiple distinct and discontinuous areas of conductive material on the exoskeleton. In other embodiments, both E-shielding and H-shielding may be similarly accomplished by coating the entire inner surface of the exoskeleton.

Hence, Winkler discloses a plastic exoskeleton containing a wire coil antenna assembly 108, but there is no coil and shield arrangement that is "located at a distance, in the order of centimetres, from an operator's hand, when the operator holds the transmission device during operation," as recited in claims 9 and 19. There is no discussion in Winkler about the distance between the coil and/or shield and the hand of an operator because the programming head 100 is part of an implantable medical device that is not normally held during operation. Moreover, even if programming head 100 were held, the electrically conductive material, such as a nickel-acrylic paint or the like, is applied to interior surfaces of the exoskeleton, and thus, would not be "centimeters" from a holder's hand. And because there is no discussion in Winkler about the distance between the coil antenna and the plastic exoskeleton, there is no teaching of the coil being "located at a distance, in the order of centimetres, from an operator's hand."

Finally, since claim 9 is dependent on claim 1 and claim 19 is dependent on claim 10, given the deficiencies in the teachings of Lee *et al.* noted above, the subject-matter of claims 9 and 19 is neither anticipated by, nor obvious over, a combination of Winkler and Lee *et al.*

In view of the foregoing, it is believed that all of the claims pending in the application, *i.e.*, claims 1 – 21, are now in condition for allowance, which action is earnestly solicited. If any issues remain in this application, the Examiner is urged to contact the undersigned at the telephone number listed below.

Respectfully submitted,
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